

Using Mates

You need ☒ a classmate

Activity

1. Wiha notices 500 gram packs of butter in a supermarket fridge. She wonders how heavy 30 packs would be.

500 grams is 0.5 kilogram. 0.5 is the same as a half. So 30×0.5 must be 15 kilograms.



0.5	0.5
1	

Discuss Wiha's reasoning. Then solve:

- 16×0.5
- 800×0.5
- 56×0.5
- $40\,000 \times 0.5$

2. The next day, Wiha's teacher, Mr Siolo, tells the class a way of making it easier to multiply several numbers.

Find a mate, if you can, for one of the numbers so that both numbers multiply together to make a whole number or a multiple of 10.

You mean like $4 \times 0.5 = 2$, Mr Siolo?
Or $12.5 \times 8 = 100$?

Exactly, Wiha!

Find two multiplying "mates" for the following decimals.

- 0.25
- 2.5
- 0.6
- 1.25

3. Mr Siolo gives the class a problem:

$$20 \times 97 \times 0.5 = \square$$

20 x 0.5 is 10. The answer must be 970.

Discuss Wiha's reasoning with a classmate.
Then discuss the strategies you could use to solve:

- a. $20 \times 806 \times 0.5 =$ b. $0.5 \times 89 \times 6 =$
c. $0.25 \times 193 \times 8 =$ d. $4 \times 326 \times 5 =$

4. Solve the following problems. Write down each step of your thinking so that someone else can follow how you worked it out.

- a. $8 \times 22 \times 0.5$ b. $5 \times 312 \times 0.6$
c. $0.2 \times 165 \times 5$ d. $4 \times 7 \times 2.5 \times 3$
e. $1.25 \times 13 \times 4$ f. $6 \times 71 \times 5$
g. $25 \times 36 \times 2$ h. $4 \times 81 \times 15$

5.

Try this one:

$$4 \times 34 \times 25 = \square$$

4 x 25 is 100.
So the answer must be 3 400.

Discuss Wiha's strategy for this problem. Then use this strategy to solve the following problems. Write down each step of your thinking for each problem.

- a. $8 \times 23 \times 25$
b. $150 \times 43 \times 2$
c. $40 \times 5 \times 5 \times 70$
d. $125 \times 60 \times 4 \times 7$

6. Make up four multiplication problems of your own that you could use a "mates" strategy to help you solve. Work out the answers for them and then give your problems to a classmate to solve.